

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 – 42. (Cancelled)

43. (New) An antibacterial vascular prosthesis prepared by a process comprising the steps of:

(a) providing a porous basic structure;
(b) depositing silver onto the surface of the porous basic structure by means of an ion beam assisted deposition technique; and
(c) impregnating the silver coated porous basic structure with an absorbable material.

44. (New) The antibacterial vascular prosthesis of claim 1 wherein the porous basic structure is made of substantially non-absorbable or only slowly absorbable polymer material.

45. (New) The antibacterial vascular prosthesis of claim 2 wherein the substantially non-absorbable or only slowly absorbable polymer material is selected from the group consisting of polyester, polytetrafluoroethylene, polyurethane and polyamide.

46. (New) The antibacterial vascular prosthesis of claim 1 wherein the porous basic structure is made of sintered material.

47. (New) The antibacterial vascular prosthesis of claim 4 wherein the sintered material is polytetrafluoroethylene.

48. (New) The antibacterial vascular prosthesis of claim 1 wherein the porous basic structure is coated with silver at least at the locations which point toward at least one surface of the prosthesis.

49. (New) The antibacterial vascular prosthesis of claim 6 wherein substantially the entire surface of the fibers are coated with silver.

50. (New) The antibacterial vascular prosthesis of claim 1 wherein the absorbable material coating comprises cross-linked biological material.

51. (New) The antibacterial vascular prosthesis of claim 1 wherein the absorbable material coating comprises synthetic polymers and copolymers which are absorbable in vivo.

52. (New) The antibacterial vascular prosthesis of claim 1 wherein the absorbable material coating further comprises one or more active substances.

53. (New) The antibacterial vascular prosthesis of claim 1 wherein the silver layer comprising pure elemental silver having a thickness of 1000 Å to 2500 Å.

54. (New) The antibacterial vascular prosthesis of claim 1 wherein silver atoms of the silver layer are impressed into the polymer surface and the silver layer adapts to the surface structure of the porous basic structure so that the pores retain their original shape and size.

55. (New) The antibacterial vascular prosthesis of claim 1 wherein the absorbable material coating seals the porous basic structure.